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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/613,341

07/03/2003

Neil Andrew Abercrombie Simpson

MRKS/0093

5149

7590

02/08/2006

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EXAMINER

PATEL, VISHAL A

ART UNIT

PAPER NUMBER

3673

DATE MAILED: 02/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/613,341		SIMPSON ET AL.	
	<b>Examiner</b>		<b>Art Unit</b>	
	Vishal Patel		3673	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 04 November 2005.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1,4-12,15-29,32,37,38,47,48,65-70 and 77-80 is/are pending in the application.
- 4a) Of the above claim(s) 33 and 71-76 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,4-12,15-29,32,37,38,47,48,65-70 and 77-80 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/4/05</u> .   | 6) <input type="checkbox"/> Other: _____                                    |

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## **DETAILED ACTION**

### ***Election/Restrictions***

1. Newly submitted claims 71-76 directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: The method claims are withdrawn, since the expansion can occur in two different directions.

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 71-76 withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1, 4-12, 15-17, 19-26, 32, 38, 47, 65-68, 70 and 79-80 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans (US. 6,409,175) in view of Blose (US. 4,822,081).

Evans illustrates a diametrically expandable coupling arrangement for coupling diametrically expandable first and second tubulars (first and second tubulars as seen in figures 7-7B). The coupling arrangement having a male thread portion on an end portion of a first member (tubular member or pin), a nose (end portion of 26 that is a nose and is received in a groove in a second member, figure 7A) along the end portion of the first tubular (26), a female thread portion

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on an end portion of a second tubular (27), the female thread and male thread portions are configured to threadedly mate, an undercut groove (groove having the nose portion) along the end portion of the second tubular adapted to receive the nose (the nose is received in the groove), the thread portions define a thread cut in an opposite direction (this is the case since the expansion tool can be inserted in both direction, see column 10, lines 15-19) to an intended direction of rotation of a rotary expansion tool (method limitation given non patentable weight in an apparatus claim) and include material properties that facilitate engagement of the threads (the threads have material properties to facilitate engagement of the female thread portion to the male thread portion) due to rotary expansion thereof (method limitation given non patentable weight in an apparatus claim). The undercut groove prevents separation of the first and second members (this is the case as seen in figures 7A-7B). The first tubular elongates axially and the second tubular contracts axially while the coupling is diametrically expanded (method limitations given little patentable weight in an apparatus claim). The coupling arrangement is dimensioned to accommodate relative axial extension between the first tubular and second tubular (this is the case due to expansion). A deformable seal (29) within a groove (31) of the coupling arrangement. The deformable seal is made of elastomeric material (elastomeric material are known to swell when contacted with fluid) and is energized by relative axial extension of the first tubular (figures 7-7B). The undercut groove features a rounded recess angle (angle on wall of the groove). The first and second tubulars comprise a seal member (29). The tubulars are metallic and so are the thread portions. As seen in figures 7-7B the nose is retained by the undercut groove. The at least one sealing member (36) is arranged and located for sealing engagement with an opposing surface adjacent a free end of the second member (figures 8-8B).

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The coupling arrangement having at least two axially spaced sealing members (sealing members 36 and 39, figure 8). The groove and the nose configured to have a first position and a second position (first position in figure 7A and second position in figure 7B). The first member and second members are pin and box members, respectively. The first seal member is capable of being swelled by a first material and the second seal is capable of being swelled by a second material (Evans coupling arrangement is for oil drilling, where first seal 39 communicates with an internal fluid and the second seal 36 will come into contact with an external fluid, also see figures 8-8B). The first material is water and the second material is oil.

The groove and the nose have a pre-expanded relative position and a post-expanded relative position, wherein the pre expanded relative position, the nose is spaced apart from the groove at a first axial distance and in the post-expanded relative position the nose is spaced apart from the groove a smaller second axial distance (method limitations given little patentable weight in an apparatus claim). The limitations that the pin member axially elongates relative to the box member upon expansion of the threaded connection and the box member axially contracts relative to the pin member upon expansion of the threaded connection (method limitations given little patentable weight in an apparatus claim).

Evans discloses the invention substantially as claimed above but fails to disclose that the threads are dovetail with flanks angles greater than 10 degrees. Blose teaches a coupling includes male threaded portion (12) and a female threaded portion (13) wherein the threaded portion are dovetail threads having flanks inclined at an angle of greater than 10 degrees (see figures 1-4 and 6-8 for the dovetail threads and column 7, lines 14-57 disclosing flanks greater than 10 degrees and also the angles claimed in claims 4-9, as to claim 10 see figure 6, as to claim

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11 see figure 11 and column 4, lines 50-55 and as to claims 12-18 see figure 6). It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the threads of Evans to be threads that are dovetail threads with inclined flanks as taught by Blose, to provide axial compressive loads and prevents separation of the joint (column 7 of Blose).

4. Claims 18, 27-29, 37, 48, 69 and 77-78 are rejected under 35 U.S.C. 103(a) as being unpatentable over Evans and Blose as applied to claim 1 above, and further in view of Kramer (US. 3,915,460).

Evans and Blose disclose the invention substantially as claimed above but fail to disclose that the elastomer is an elastomer that is capable of swelling when applied with fluid. Kramer teaches to have a seal that is formed from an elastomer that swells when applied with fluid. It would have been obvious to one having ordinary skill in the art at the time the invention was made to configure the elastomer of Evans and Blose to be a swellable elastomer as taught by Kramer to provide a sealing element that absorbs any fluid that leaks past a joint (column 4, lines 36-37 of Kramer).

#### ***Response to Arguments***

5. Applicant's arguments filed 5/20/05 have been fully considered but they are not persuasive.

Applicants' argument that Evans teaches that there is no axial separation between the nose and the groove in figure 10a is correct but Evans in figures 7-8B reaches that the nose and the groove are in a first position prior to expansion and in a second position after expansion.



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Furthermore as stated in the office action that applicants method limitations in the apparatus are given little patentable weight.

Applicant argument that Evans does not teach the swelling of a sealing material is not persuasive because Kramer teaches this.

Applicants' argument about swelling elastomers is not persuasive because as evidence provided by Voitik (US. 3,945,650) that elastomers are known to swell when exposed to fluids (column 1, lines 25-35).

### ***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

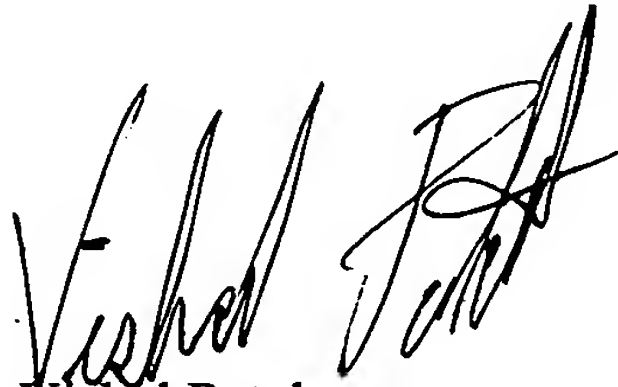
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vishal Patel whose telephone number is 571-272-7060. The examiner can normally be reached on 6:30am to 8:00pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, J. James Lee can be reached on 571-272-7044. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

VP  
January 31, 2006



Vishal Patel  
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